

Fig.1

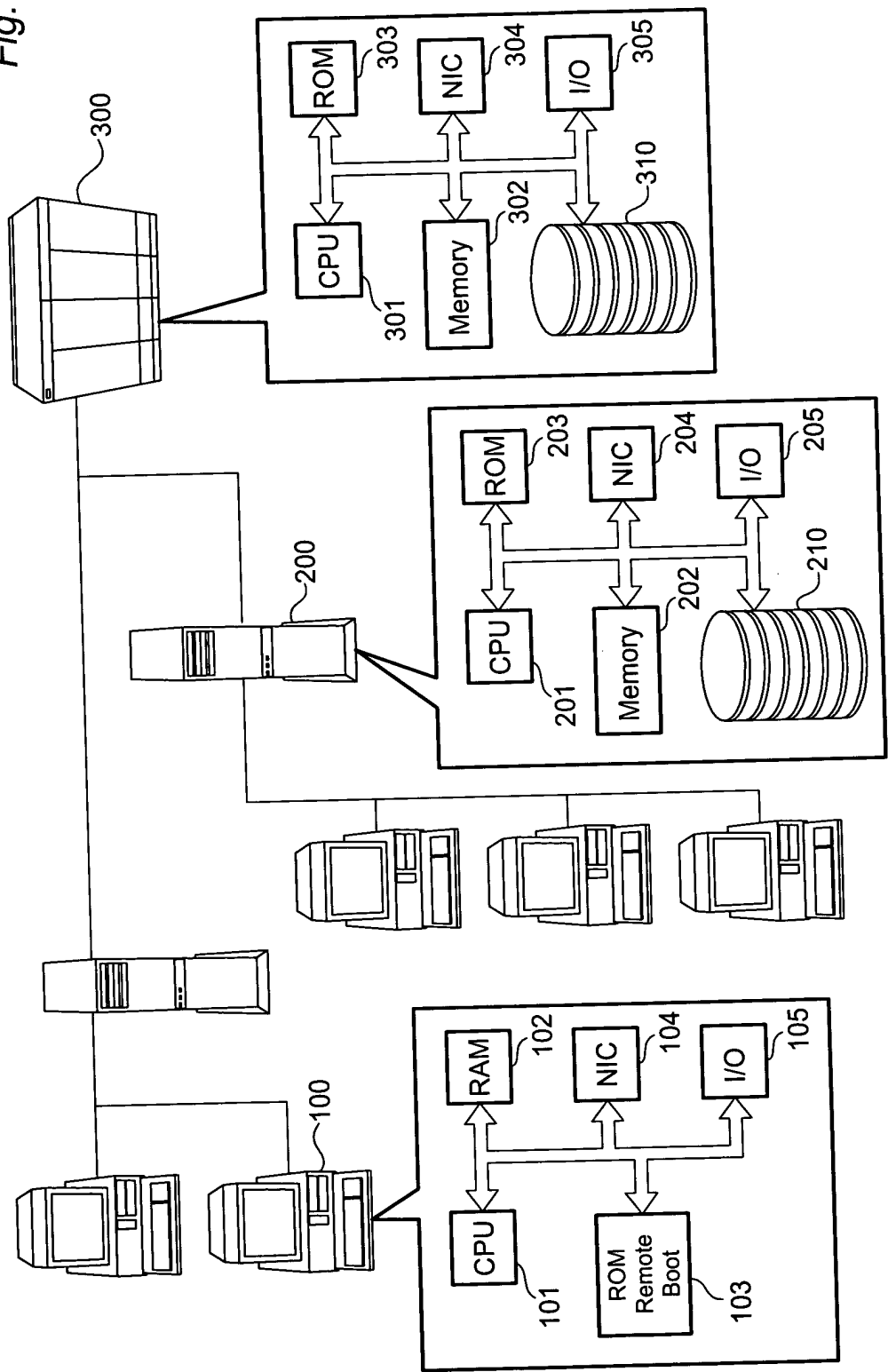


Fig.2

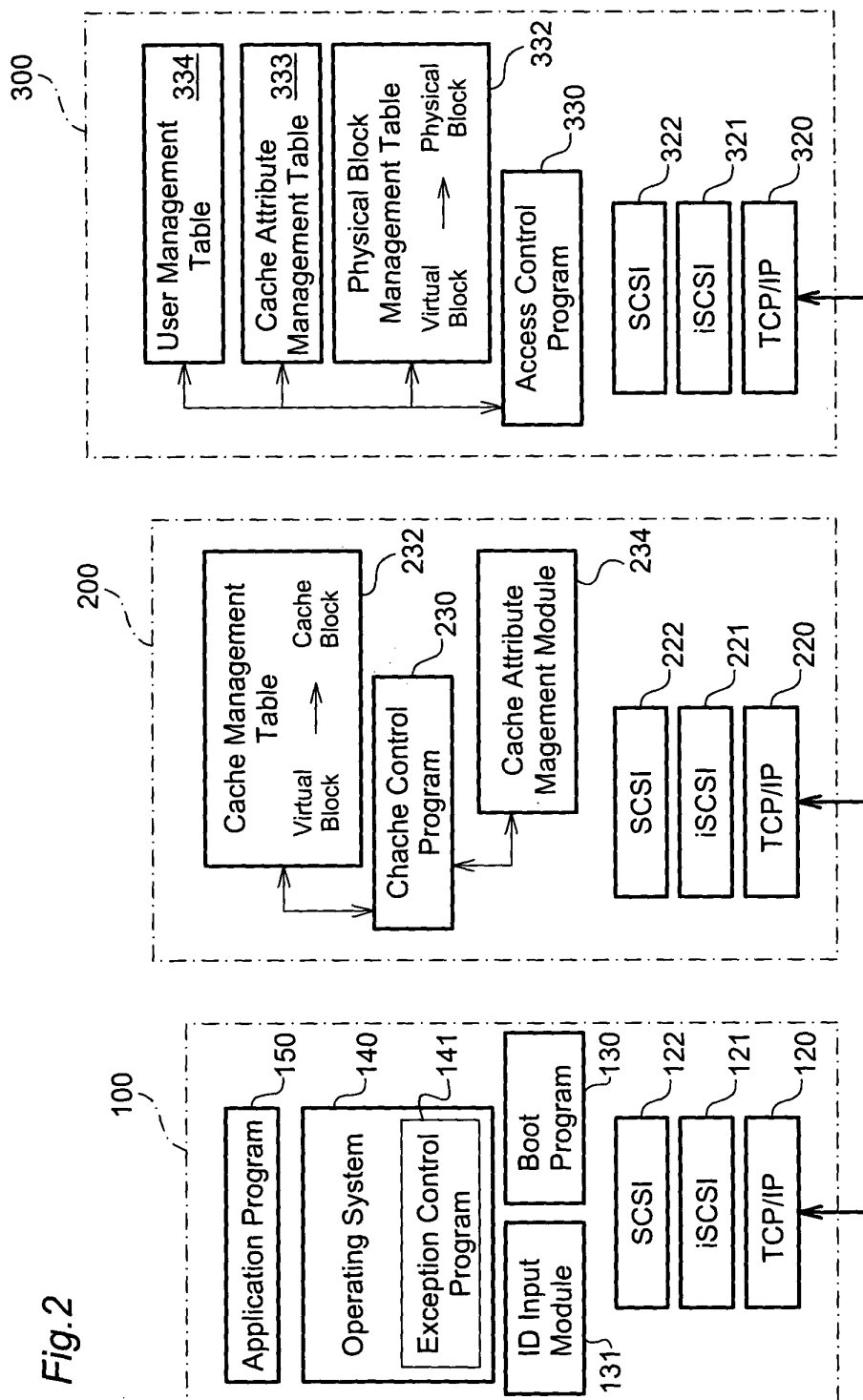


Fig.3

334

User ID	Password	Virtual Volume	Attribute	IP Address
User A	****	VDa	Personal	IPa
User B	****	VDb	Personal	
User C	****	VDc	Shared	

Fig.4

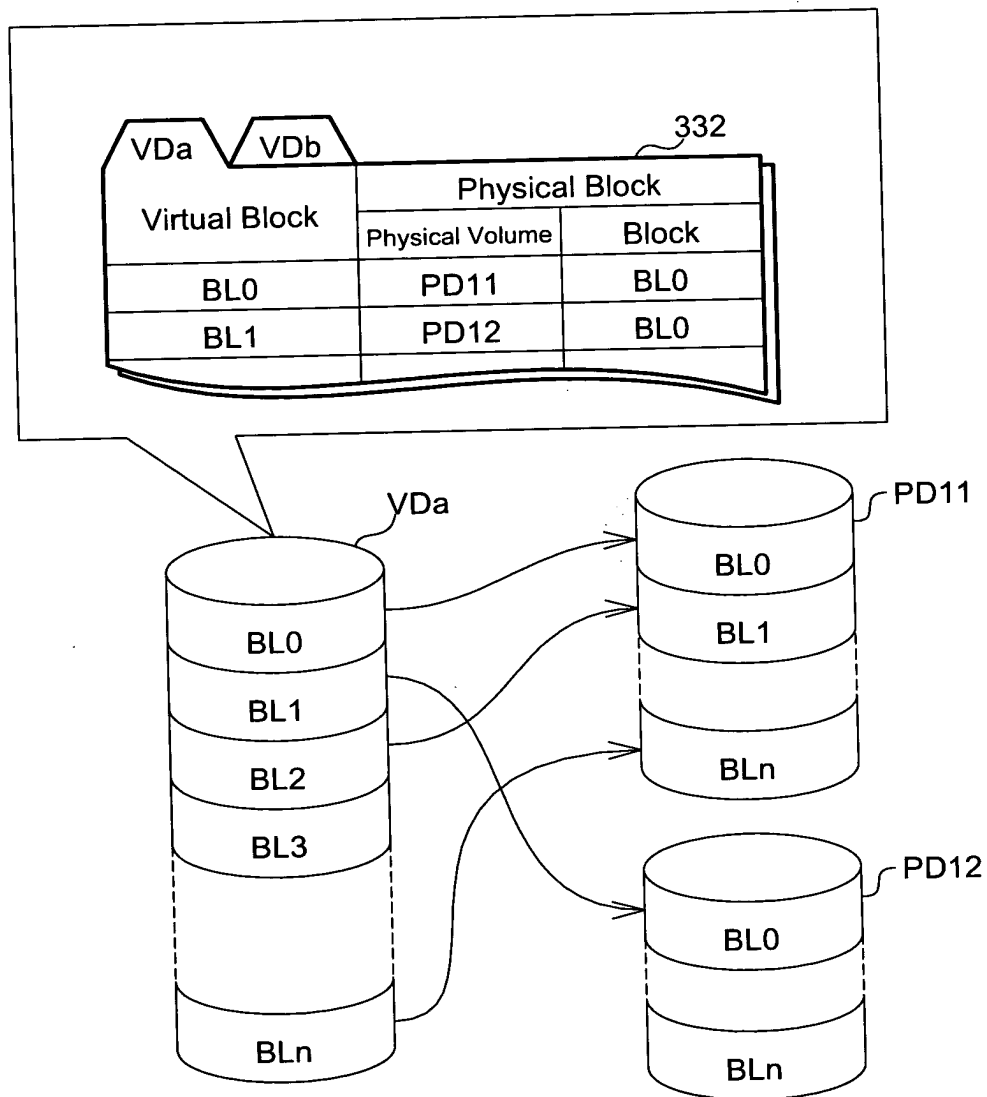


Fig. 5

232

Virtual Block		Cache Block		Write in Disk
Virtual Volume	Block	Storage location	Block	
VDa	BL0	Disk	BL0	OK
VDb	BL0	Memory	BL1	OK
VDa	BL1	Memory	BL0	NG
VDb	BL2	Disk	BL3	OK

Fig.6

Virtual Volume	Read Out		Write In	
	Physical Volume	Cache	Physical Volume	Cache
VDa	PD11	OK	PD11	NG
	PD12	NG	PD12	NG
	• •		• •	• •
VDb	PD21	OK	PD21	OK
	PD12	NG	PD12	NG
	• •		• •	

333

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Fig.7

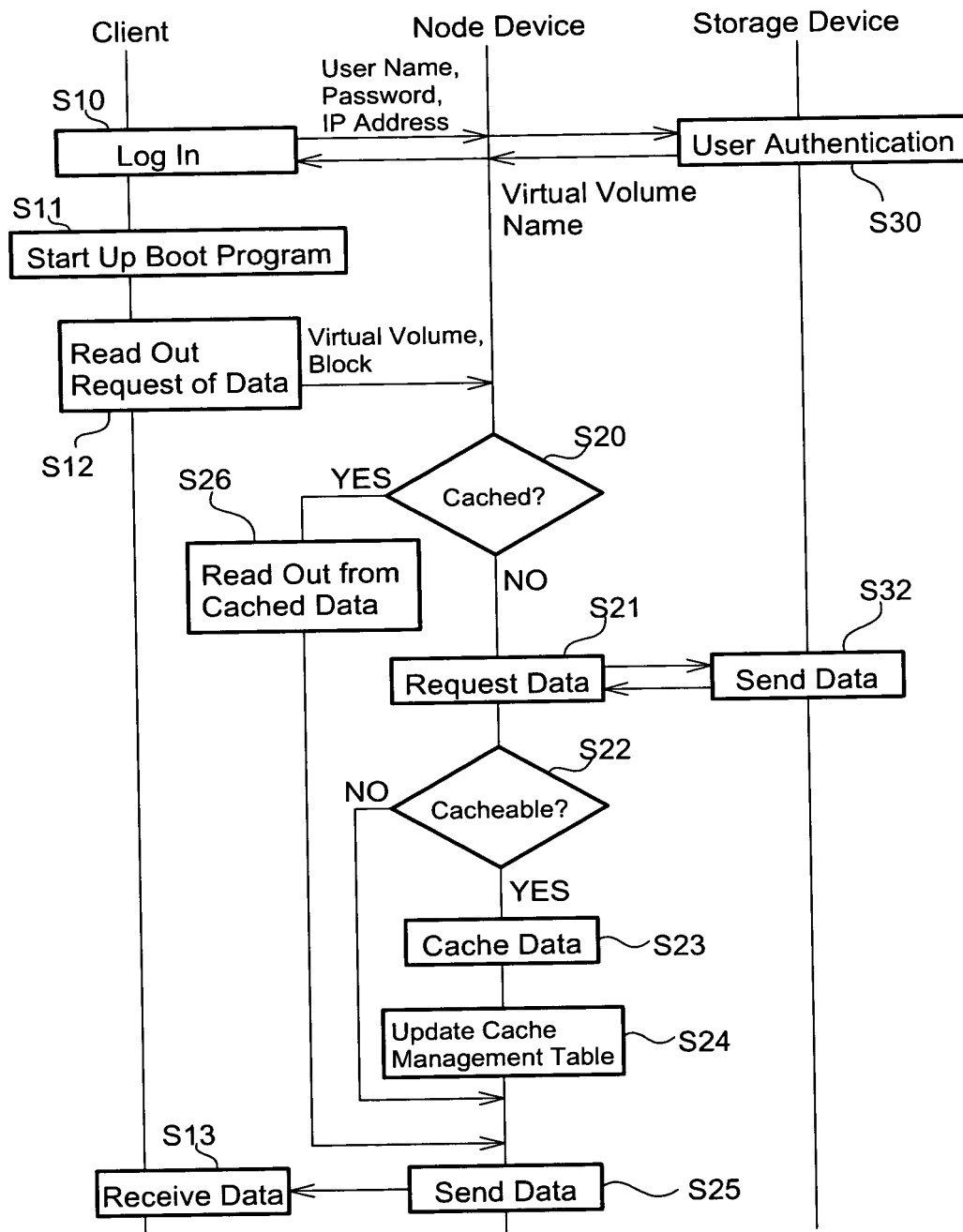


Fig.8

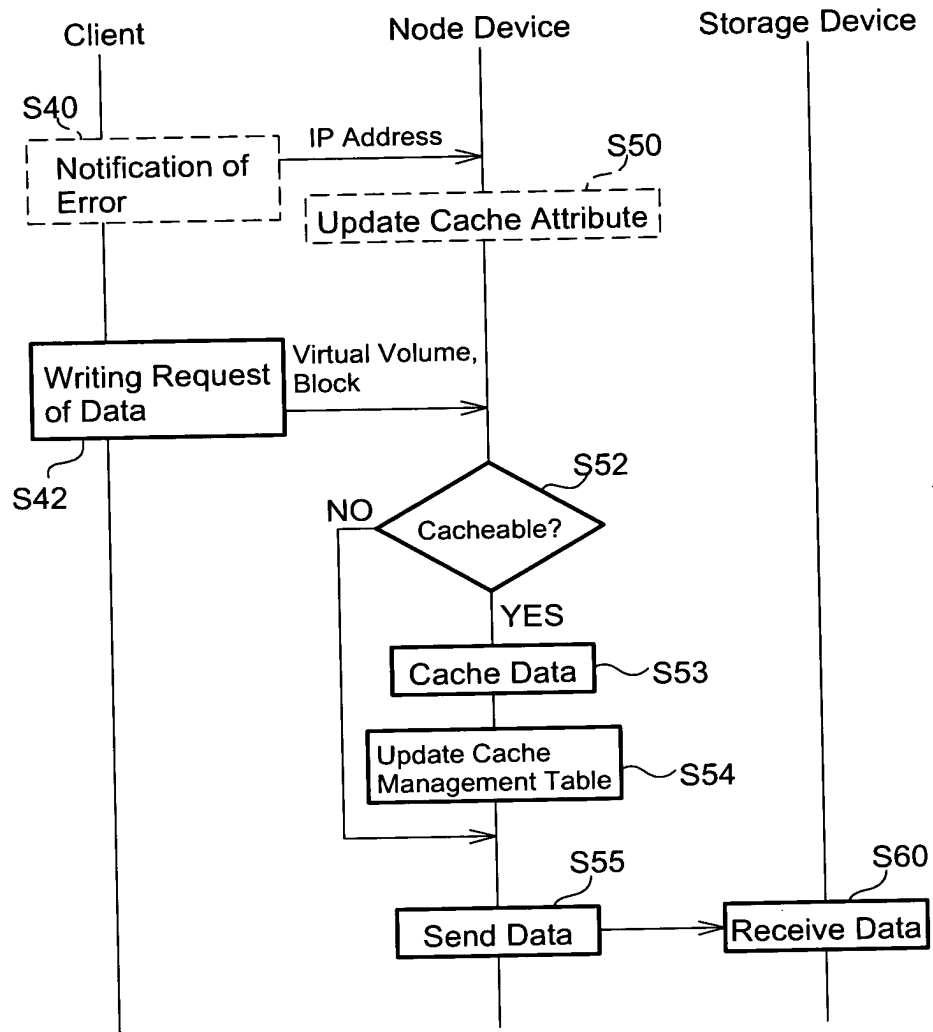


Fig.9

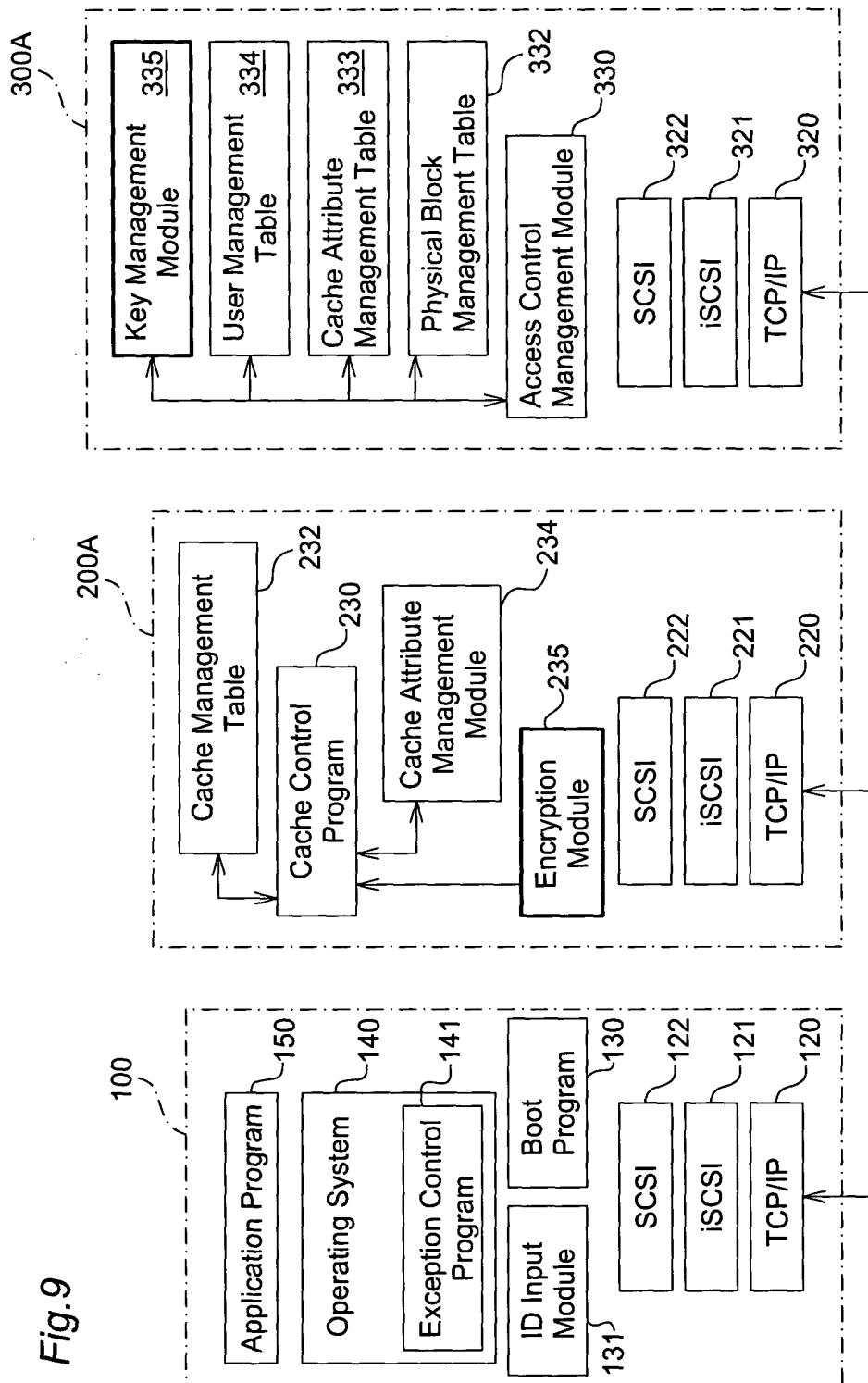


Fig.10

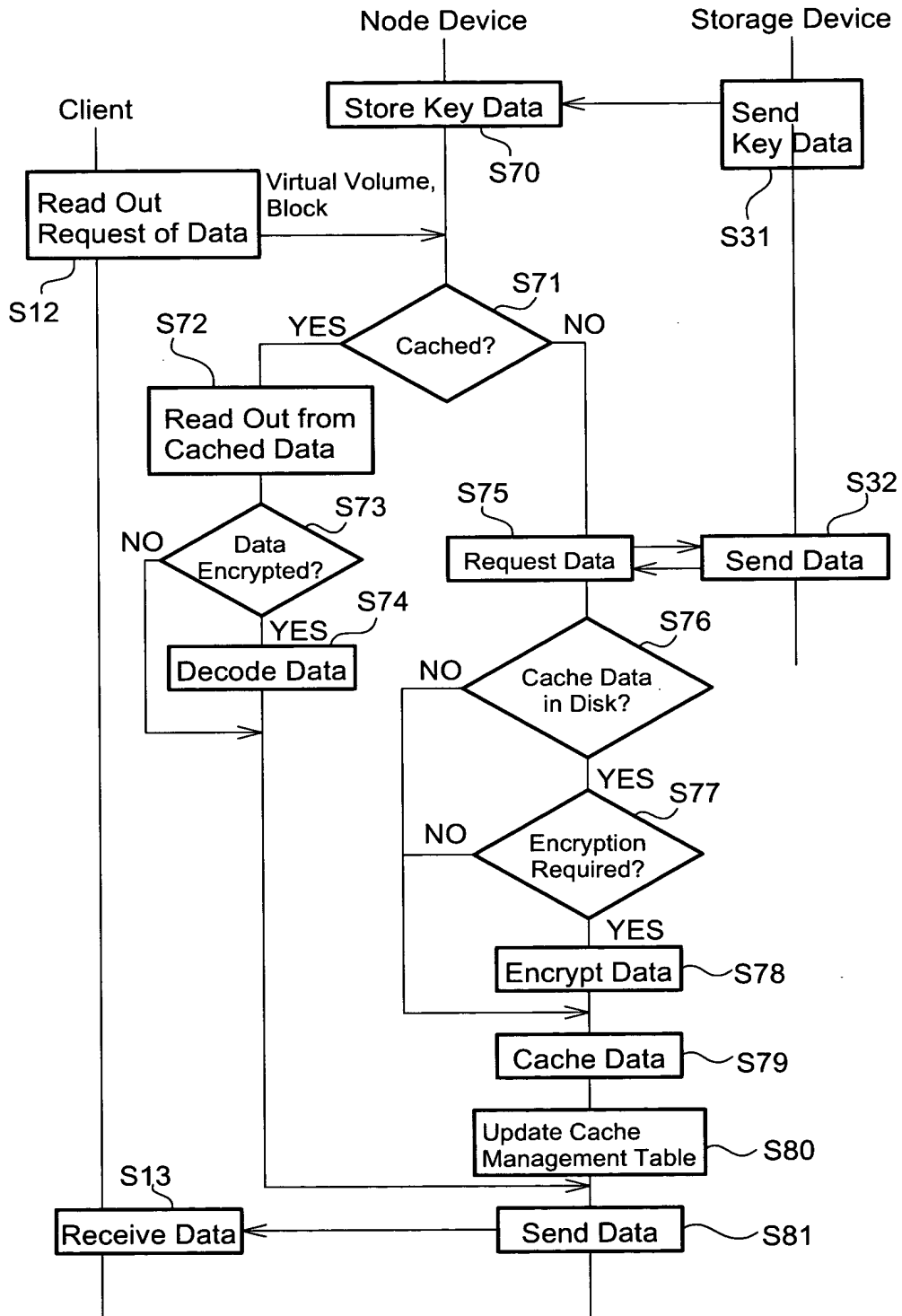
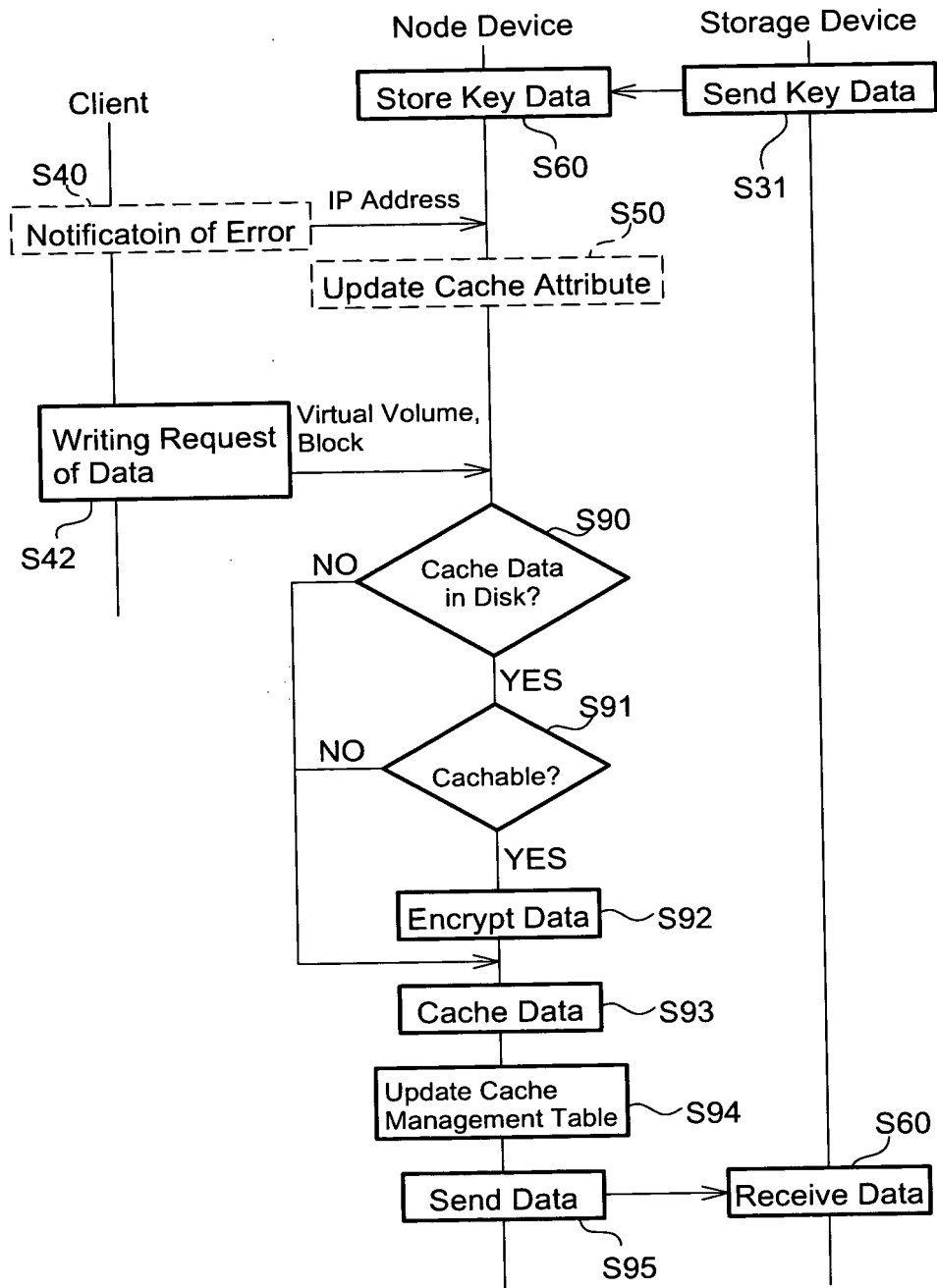


Fig.11



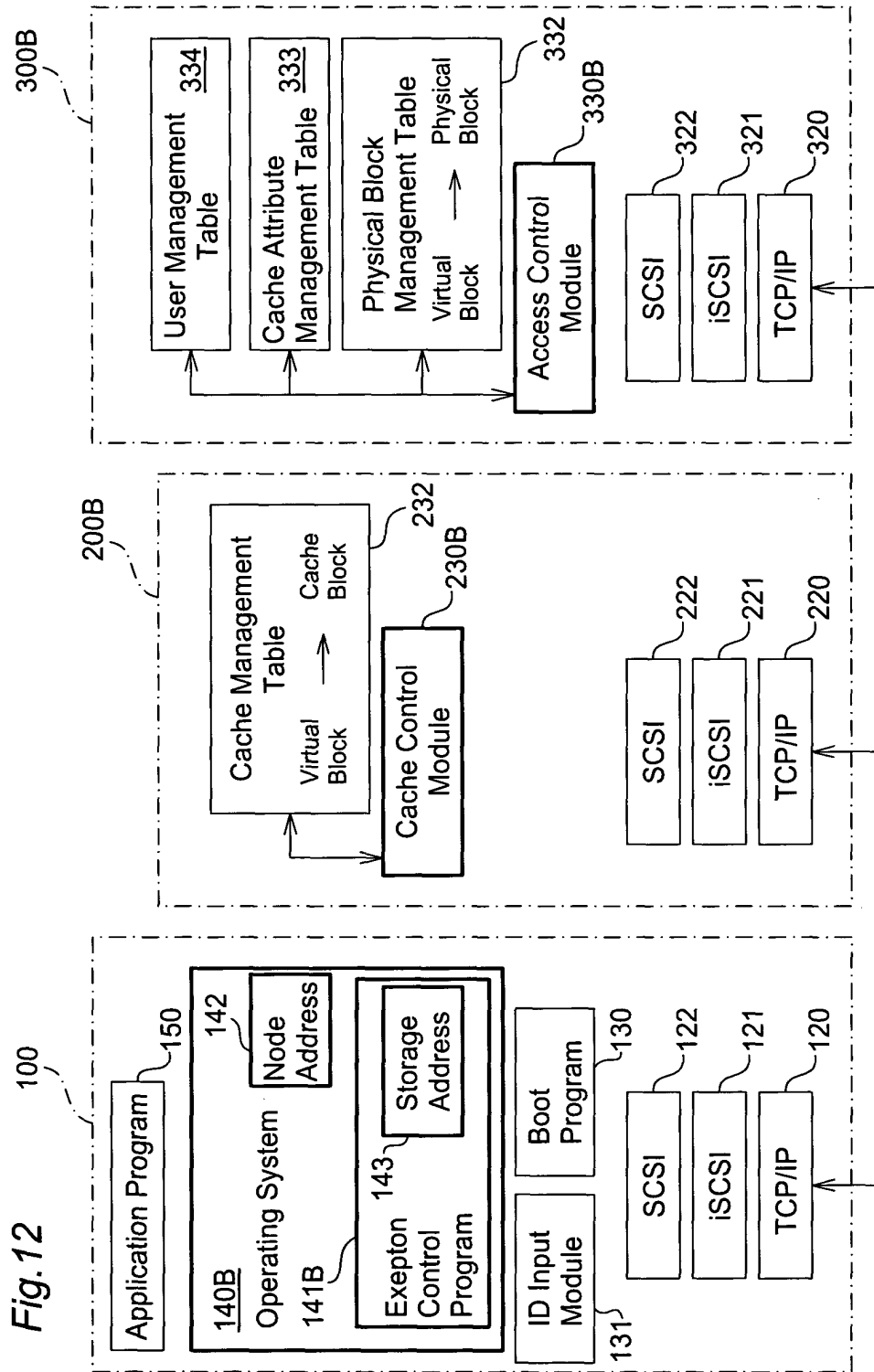


Fig.13

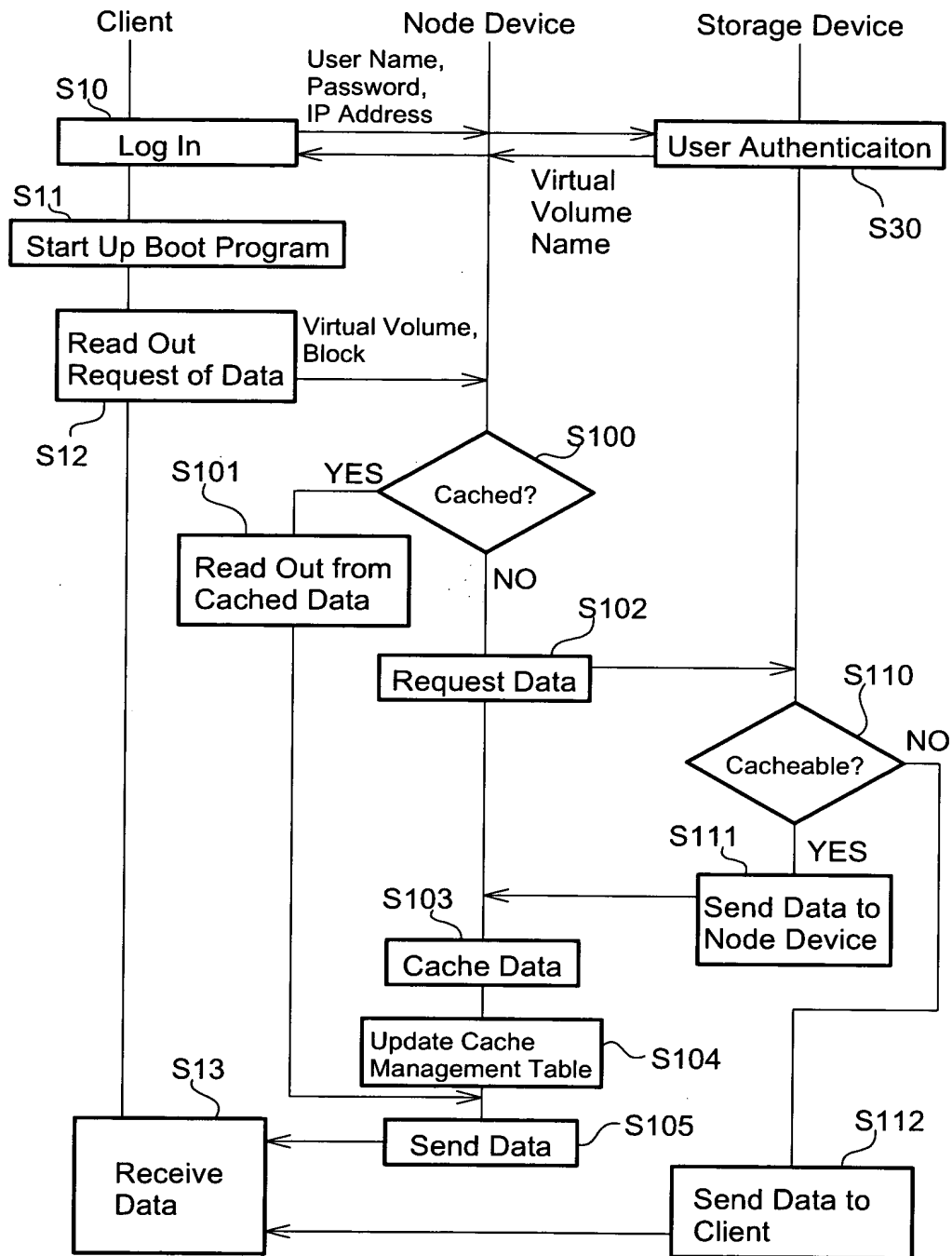


Fig. 14

